We Claim:

1. A highly heat-resistant laminated component for a fusion reactor, comprising:

a plasma-facing area made of tungsten or a tungsten alloy with a tungsten concentration of > 90 % by weight, a heat-dissipating area of copper or a copper alloy with a thermal conductivity of > 250 W/mK and a mean grain size of > 100 µm, and an area in between said plasma-facing area and said heat-dissipating area of a refractory-metal-copper composite;

said refractory-metal-copper composite having a macroscopically uniform copper and tungsten concentration progression and a refractory metal concentration x of 10 vol.% < x < 40 vol.% throughout a thickness d of 0.1 mm < d < 4 mm, and a refractory metal phase forming a virtually continuous skeleton.

2. The component according to claim 1, which comprises a component of a metallic material having a strength of > 300 MPa at room temperature bonded to said heat-dissipating area made of copper or the copper alloy.

3. The laminated component according to claim 2, wherein said component consists of a Cu-Cr-Zr alloy.

4. The laminated component according to claim 2, wherein said component consists of an austenitic steel.

5. The laminated component according to claim 1, wherein said area between said plasma-facing area and said heat-dissipating area consists of a refractory-metal-copper composite produced with a powder–metallurgical process.

6. The laminated component according to claim 5, wherein said refractory-metal-copper composite consists of tungsten and 10 to 40 vol.% copper.

7. The laminated component according to claim 5, wherein said refractory metal–copper composite consists of molybdenum and 10 to 40 vol.% copper.

8. The laminated component according to claim 1, wherein said plasma-facing area is a segmented structure of tungsten or a tungsten-alloy.

9. The laminated component according to claim 1 in the form of a flat tile.

10. The laminated component according to claim 1 in the form of a monoblock.

11. A method for producing a highly heat-resistant laminated flat tile component, which comprises:

bonding one or more shaped parts of tungsten or tungsten alloy with one or more plate-shaped parts of a refractory metal-copper-composite in vacuum or a non-oxidative gas atmosphere;

joining the shaped parts to an area made of copper or a copper alloy by melting the copper-containing constituents and subsequently cooling to room temperature;

mechanically processing the resulting component; and

subsequently bonding the mechanically processed component in a form-fit with a metal component having a strength of > 300 MPa in a bonding process selected from the group consisting of welding, soldering, brazing, diffusion, and a plating process.

12. The method according to claim 11, which comprises bonding the shaped parts and plate-shaped parts in a temperature-resistant and corrosion-resistant form.

13. The method according to claim 12, wherein the temperature-resistant and corrosion-resistant form is a graphite form.

14. The method according to claim 11, which comprises introducing a foil of copper or copper alloy with a thickness

of 0.005 to 0.5 mm between the shaped part of tungsten or tungsten alloy and the plate-shaped part of the refractory-metal-copper composite.

15. The method according to claim 14, which comprises applying a layer consisting of a ferrous metal in elemental or alloyed form to a bonding surface of one of the shaped part of tungsten or tungsten alloy, the plate-shaped part of the refractory-metal-copper composite, and the foil of copper or copper alloy.

16. The method according to claim 15, wherein the ferrous metal is nickel.

17. The method according to claim 11, which comprises applying a layer consisting of a ferrous metal in elemental or alloyed form to a bonding surface of one of the shaped part of tungsten or tungsten alloy and the plate-shaped part of the refractory-metal-copper composite.

18. The method according to claim 17, wherein the ferrous metal is nickel.

19. A method for producing a highly heat-resistant monoblock component, which comprises:

bonding one or more shaped parts of tungsten or a tungsten alloy and formed with bores to one or more ring-shaped parts of a refractory metal copper-composite in a vacuum or inert gas atmosphere;

bonding to an area consisting of copper or a copper alloy by melting the copper-containing constituents and subsequently cooling to room temperature;

mechanically processing the resulting component;

subsequently bonding the mechanically processed component in a form-fit with a metal component having a strength of > 300 MPa in a bonding process selected from the group consisting of welding, soldering, brazing, diffusion, and a plating process.

20. The method according to claim 19, which comprises bonding the shaped parts and plate-shaped parts in a temperature-resistant and corrosion-resistant form.

21. The method according to claim 20, wherein the temperature-resistant and corrosion-resistant form is a graphite form.

22. The method according to claim 19, which comprises introducing a foil of copper or copper alloy with a thickness of 0.005 to 0.5 mm between the shaped part of tungsten or

tungsten alloy and the ring-shaped part of the refractory-metal-copper composite.

23. The method according to claim 22, which comprises applying a layer consisting of a ferrous metal in elemental or alloyed form to a bonding surface of one of the shaped part of tungsten or tungsten alloy, the ring-shaped part of the refractory-metal-copper composite, and the foil of copper or copper alloy.

24. The method according to claim 23, wherein the ferrous metal is nickel.

25. The method according to claim 19, which comprises applying a layer consisting of a ferrous metal in elemental or alloyed form to a bonding surface of one of the shaped part of tungsten or tungsten alloy and the ring-shaped part of the refractory-metal-copper composite.

26. The method according to claim 25, wherein the ferrous metal is nickel.